FIG. 1

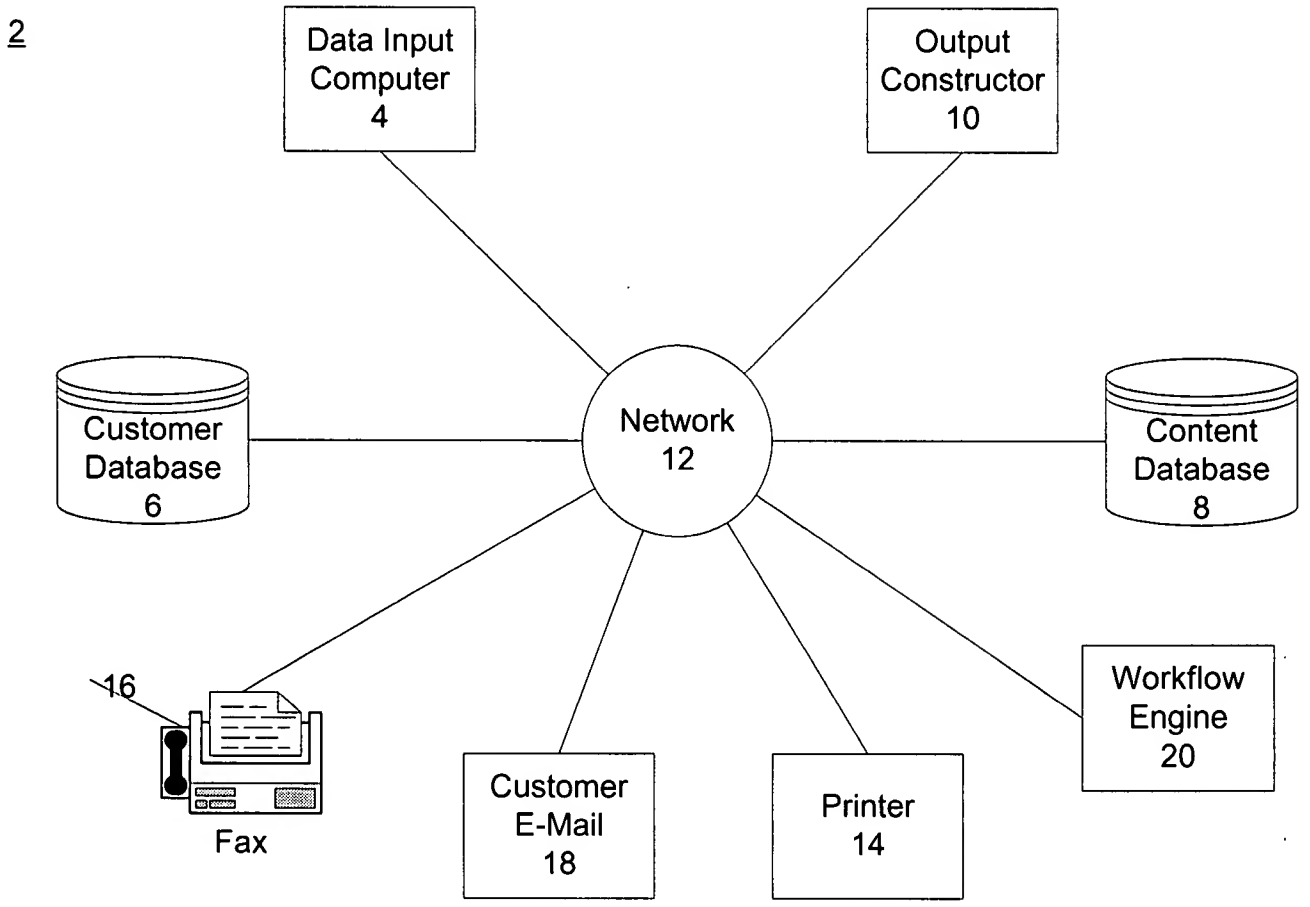

2
Data Input Computer 4
Output Constructor 10
Customer Database 6
Network 12
Content Database 8
16
Fax
Customer E-Mail 18
Printer 14
Workflow Engine 20

FIG. 2a

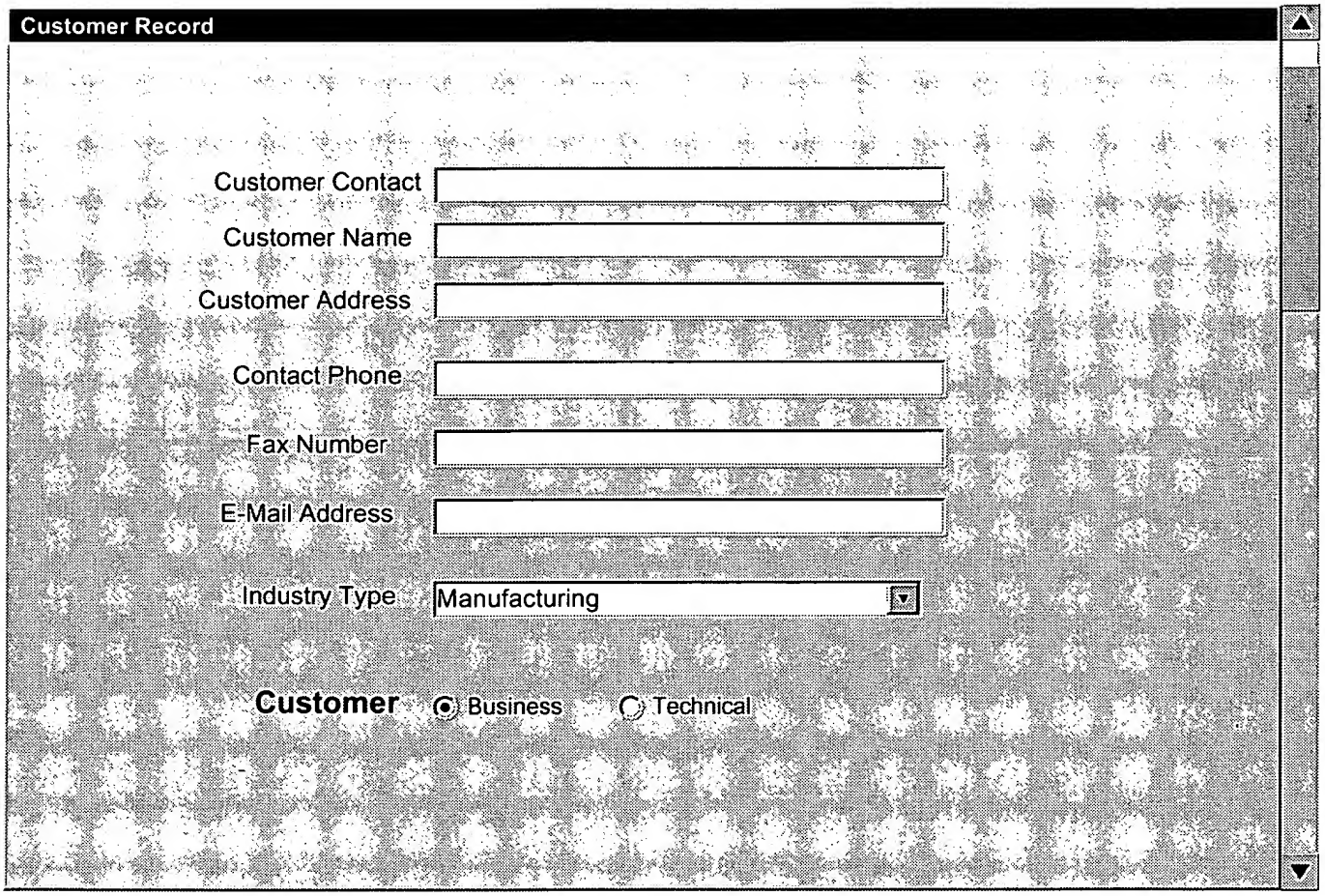
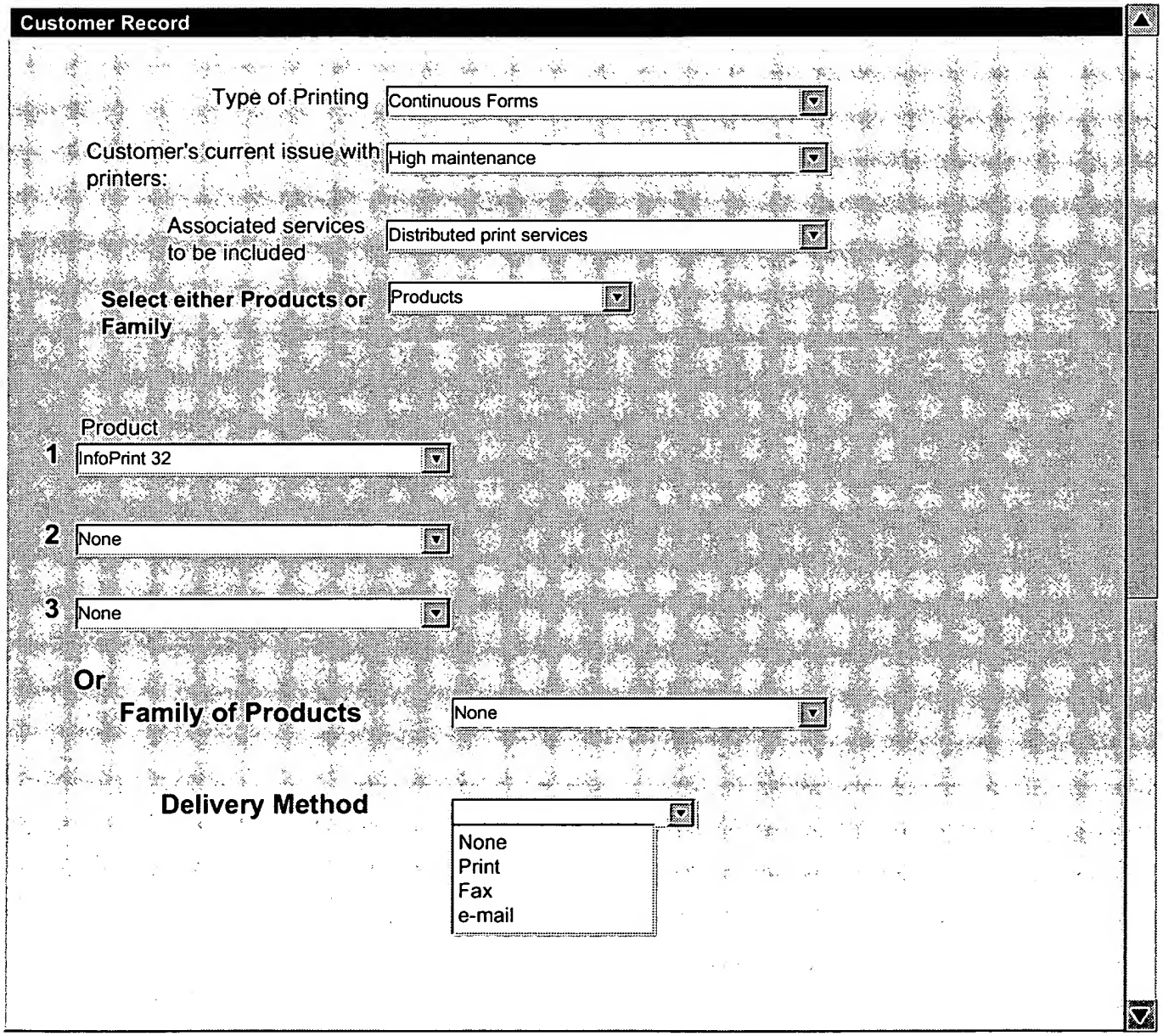

Customer Record
Customer Contact
Customer Name
Customer Address
Contact Phone
Fax Number
E-Mail Address
Industry Type
Manufacturing
Customer
Business
Technical

FIG. 2b


Customer Record
Type of Printing
Continuous Forms
Customer's current issue with printers:
High maintenance
Associated services to be included
Distributed print services
Select either Products or Family
Products
Product
1
InfoPrint 32
2
None
3
None
Or
Family of Products
None
Delivery Method
None
Print
Fax
e-mail

A reliable, high-throughput printer for cross-industry network applications

FIG. 3

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IBM

IBM 3130 50

Highlights

60

- ***Features high throughput at up to 30 ipm, and up to 200,000 impressions per month***
- ***Supports multiple data streams including PostScript Level 2, PCL5e and IPDS***
- ***Handles seven paper sizes including A3/ledger (11"x17") paper***

62

- ***Connects to three network interfaces simultaneously***
- ***Offers duplex model for two-sided printing***

64

- ***Separates print jobs with dedicated input trays and output stackers***
- ***Supports up to four input trays that hold 3,000 sheets of paper***

66

- ***Low cost of operation***
- ***Increase print performance, error recovery and attachment flexibility with the AFCCU***

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The highly reliable, cut-sheet IBM® 3130 Advanced Function Printer combines quality printing and media flexibility with multiple-interface networking. The printer's advanced controller technology simplifies the printing operations of complex computing environments.

Environment sharing

Today's complex computing environments require a printer to support multiple data streams and network connections. The IBM 3130 natively supports PostScript® Level 2, PCL5e, and IPDS™ data streams, as well as data stream sensing and switching. With these capabilities, the IBM 3130 can print from both host and Local Area Network (LAN) connections with efficiency. The printer can also support three network interfaces simultaneously. Open system attachments include Token-Ring, Ethernet and PC Parallel interfaces.

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Media flexibility

In addition to card stock and labels, the IBM 3130 handles all popular paper types and seven paper sizes, including A3/ledger (11"x17") paper. With an input capacity of up to 3,000 sheets, an output capacity of up to 2,500 sheets, and a print speed of 30 ipm, the IBM 3130 easily handles large-volume print jobs. To retain print job separation, each input tray and output stacker can be linked and dedicated to a specified application.

Advanced controller performan e

The IBM 3130 leverages the power of the Advanced Function Common Control Uni™ (AFCCU™) to ensure quality, performance, reliability and efficiency. The control unit's RISC technology incorporates attachment flexibility so the printer can support Intelligent Printer Data Stream™ (IPDS) environments as well as LAN environments. The AFCCU supports

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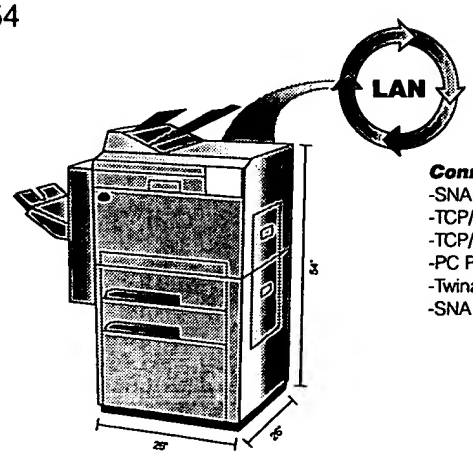


Connections
-SNA Token-Ring
-TCP/IP Token-Ring
-TCP/IP Ethernet
-PC Parallel
-Twinax
-SNA SDLC

The IBM 3130 Advanced Function Printer features high-throughput, the AFCCU and AFP software to cost-effectively produce large print jobs over complex networks.

FIG. 4

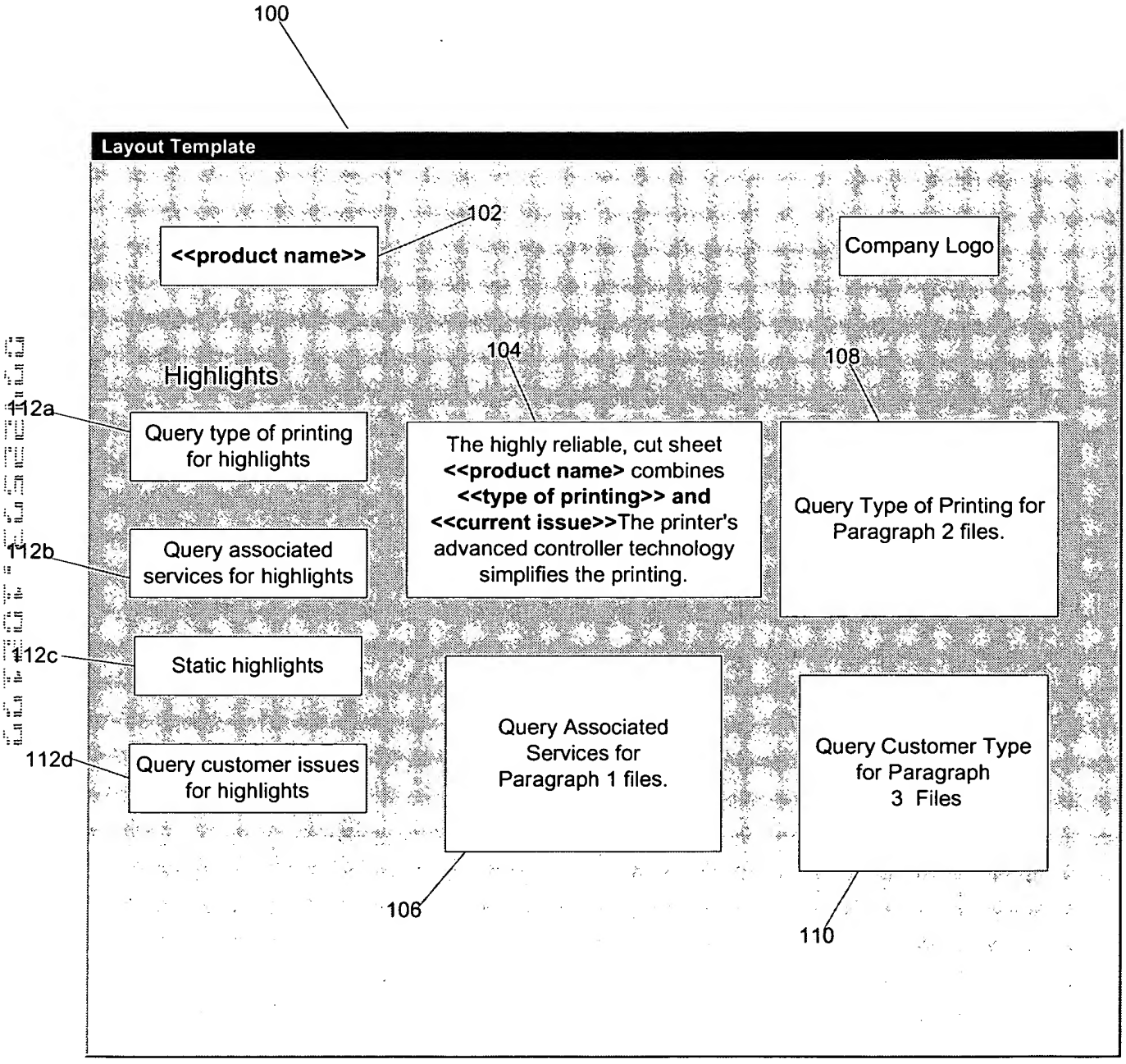

100
Layout Template
<<product name>>
102
Company Logo
Highlights
104
108
112a
Query type of printing for highlights
The highly reliable, cut sheet <<product name> combines <<type of printing>> and <<current issue>>The printer's advanced controller technology simplifies the printing.
Query Type of Printing for Paragraph 2 files.
112b
Query associated services for highlights
112c
Static highlights
Query Associated Services for Paragraph 1 files.
Query Customer Type for Paragraph 3 Files
112d
Query customer issues for highlights
106
110

FIG. 5a

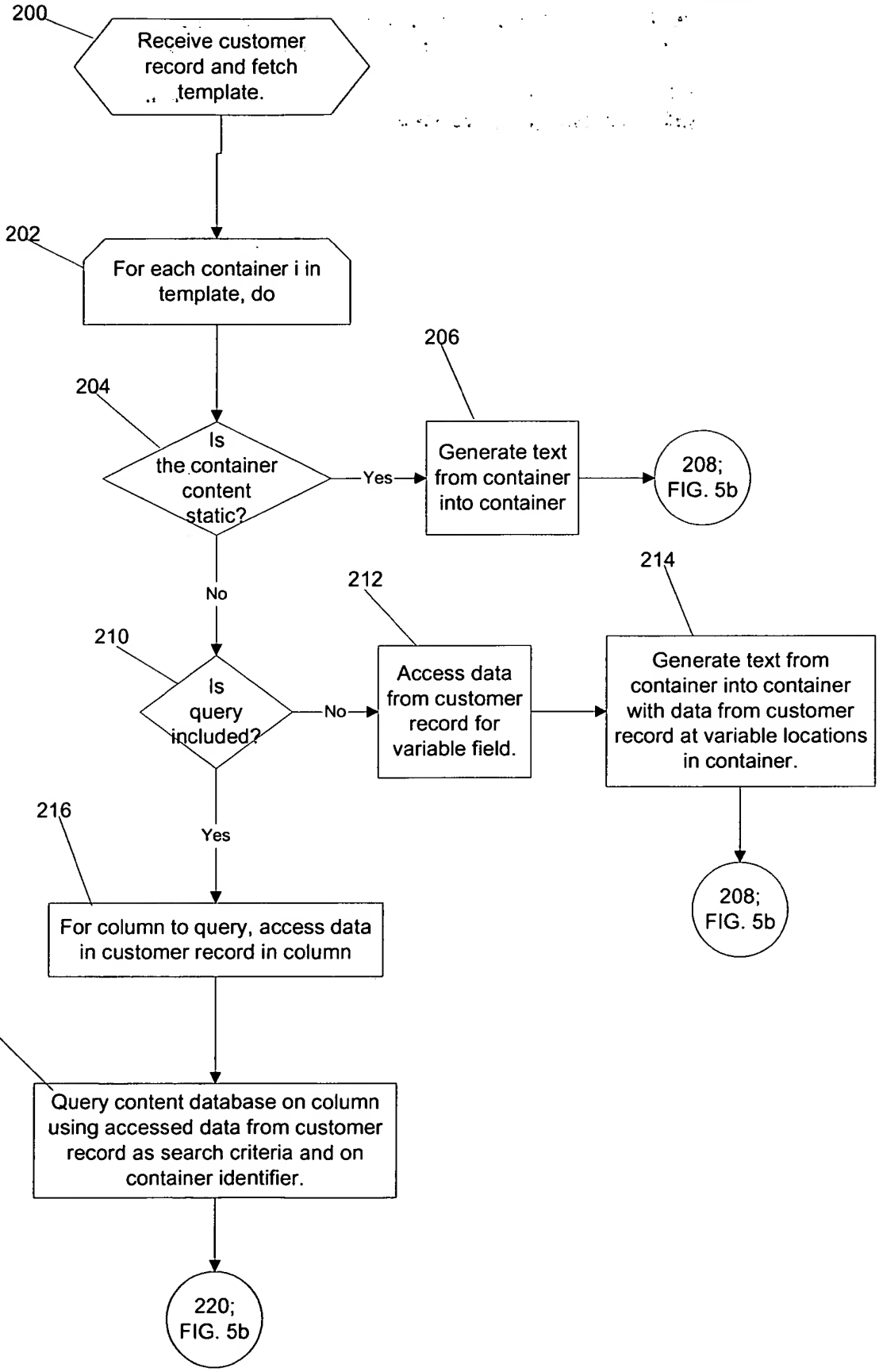

200
Receive customer record and fetch template.
202
For each container i in template, do
204
Is the container content static?
Yes
206
Generate text from container into container
208; FIG. 5b
No
210
Is query included?
No
212
Access data from customer record for variable field.
214
Generate text from container into container with data from customer record at variable locations in container.
208; FIG. 5b
Yes
216
For column to query, access data in customer record in column
218
Query content database on column using accessed data from customer record as search criteria and on container identifier.
220; FIG. 5b

FIG. 5b

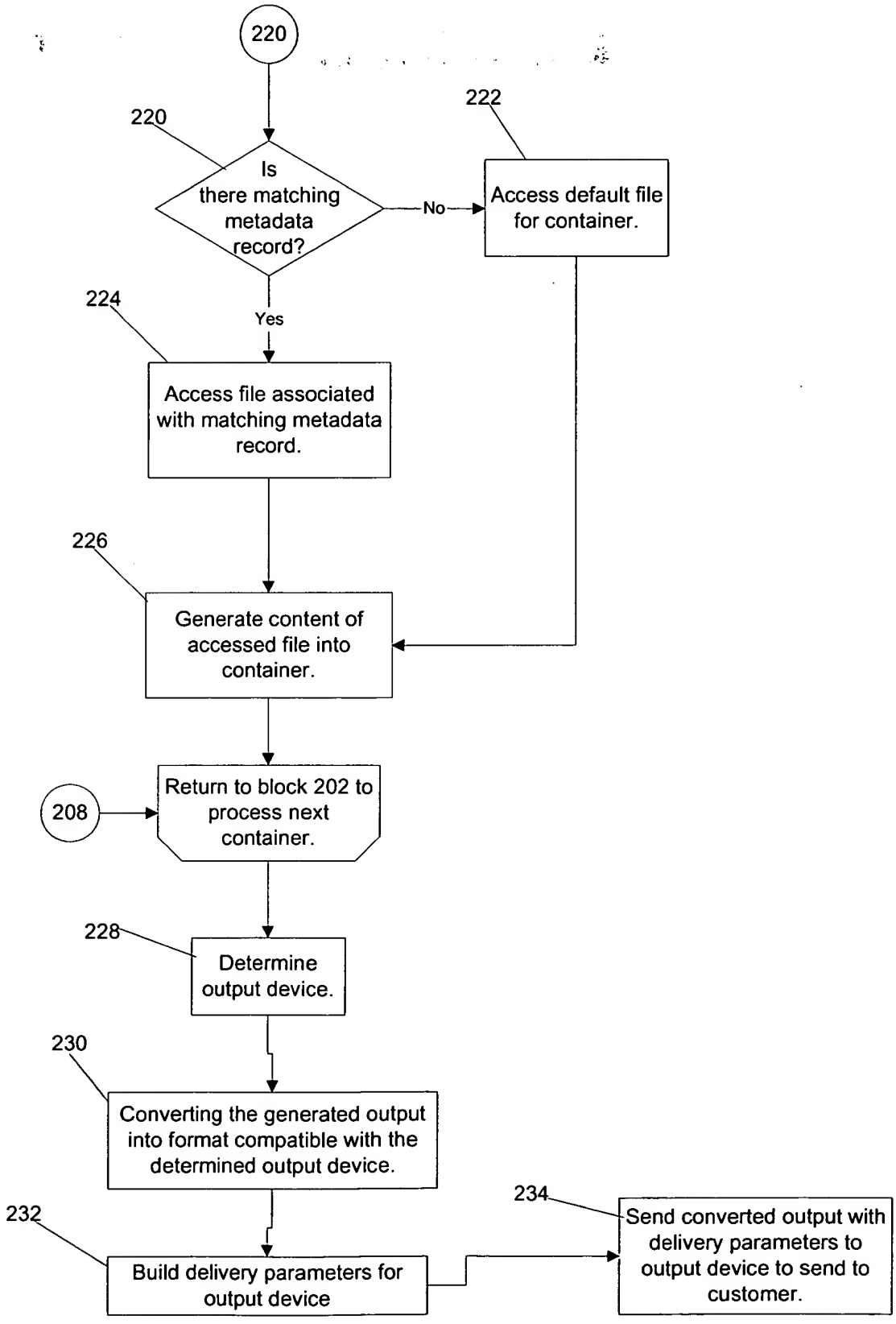

220
220
Is there matching metadata record?
No
222
Access default file for container.
Yes
224
Access file associated with matching metadata record.
226
Generate content of accessed file into container.
208
Return to block 202 to process next container.
228
Determine output device.
230
Converting the generated output into format compatible with the determined output device.
232
Build delivery parameters for output device
234
Send converted output with delivery parameters to output device to send to customer.

FIG. 6

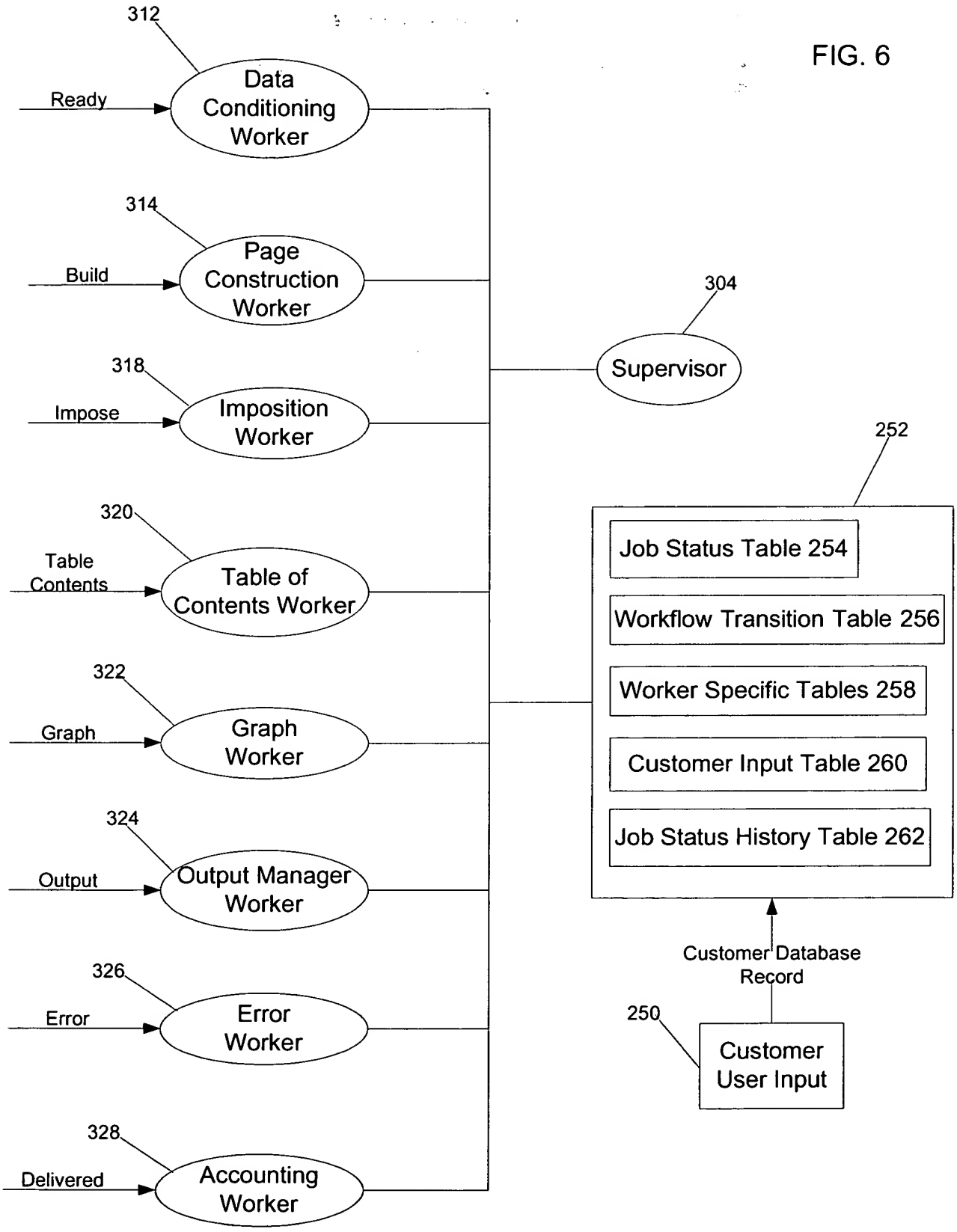

312
Data Conditioning Worker
Ready
314
Page Construction Worker
Build
318
Imposition Worker
Impose
320
Table of Contents Worker
Table Contents
322
Graph Worker
Graph
324
Output Manager Worker
Output
326
Error Worker
Error
328
Accounting Worker
Delivered
304
Supervisor
252
Job Status Table 254
Workflow Transition Table 256
Worker Specific Tables 258
Customer Input Table 260
Job Status History Table 262
Customer Database Record
250
Customer User Input

FIG. 7

330

Workflow Name	From Worker	From State	To Worker	To State
2-up Print	GetInput	Complete	Condition	Condition Ready
2-up Print	GetInput	Error	ErrHandler	InputErr
2-up Print	Condition	Complete	PageConstructor	Page Ready
2-up Print	Condition	Need Graphs	GraphMaker	Graph Ready
2-up Print	Condition	Error	ErrHandler	CondErr
2-up Print	Graph Maker	Complete	PageConstructor	PageReady
2-up Print	Graph Maker	Error	ErrHandler	GraphErr

FIG. 8

Job ID	Current Status	Current Worker	Workflow Name	Status Timestamp	Priority	Update Flag
1	Ready	Condition	2-up Print		2	0
2	Ready	GetInput	2-up Print		1	0
3	Need Graphs	Condition	2-up Print		2	1
4	Complete	Graph Maker	2-up Print		1	

FIG. 9

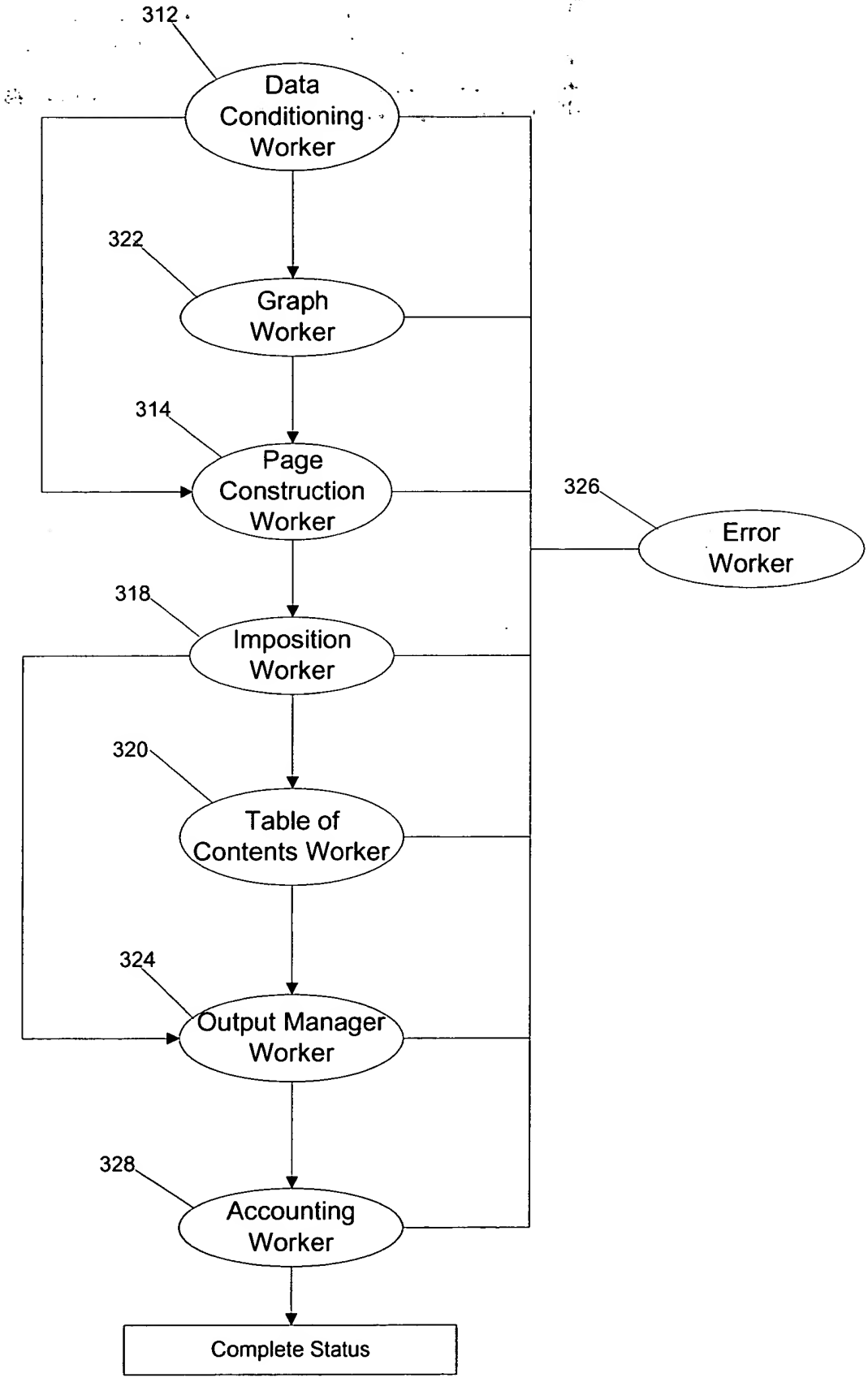

312
Data Conditioning Worker
322
Graph Worker
314
Page Construction Worker
326
Error Worker
318
Imposition Worker
320
Table of Contents Worker
324
Output Manager Worker
328
Accounting Worker
Complete Status

FIG. 10

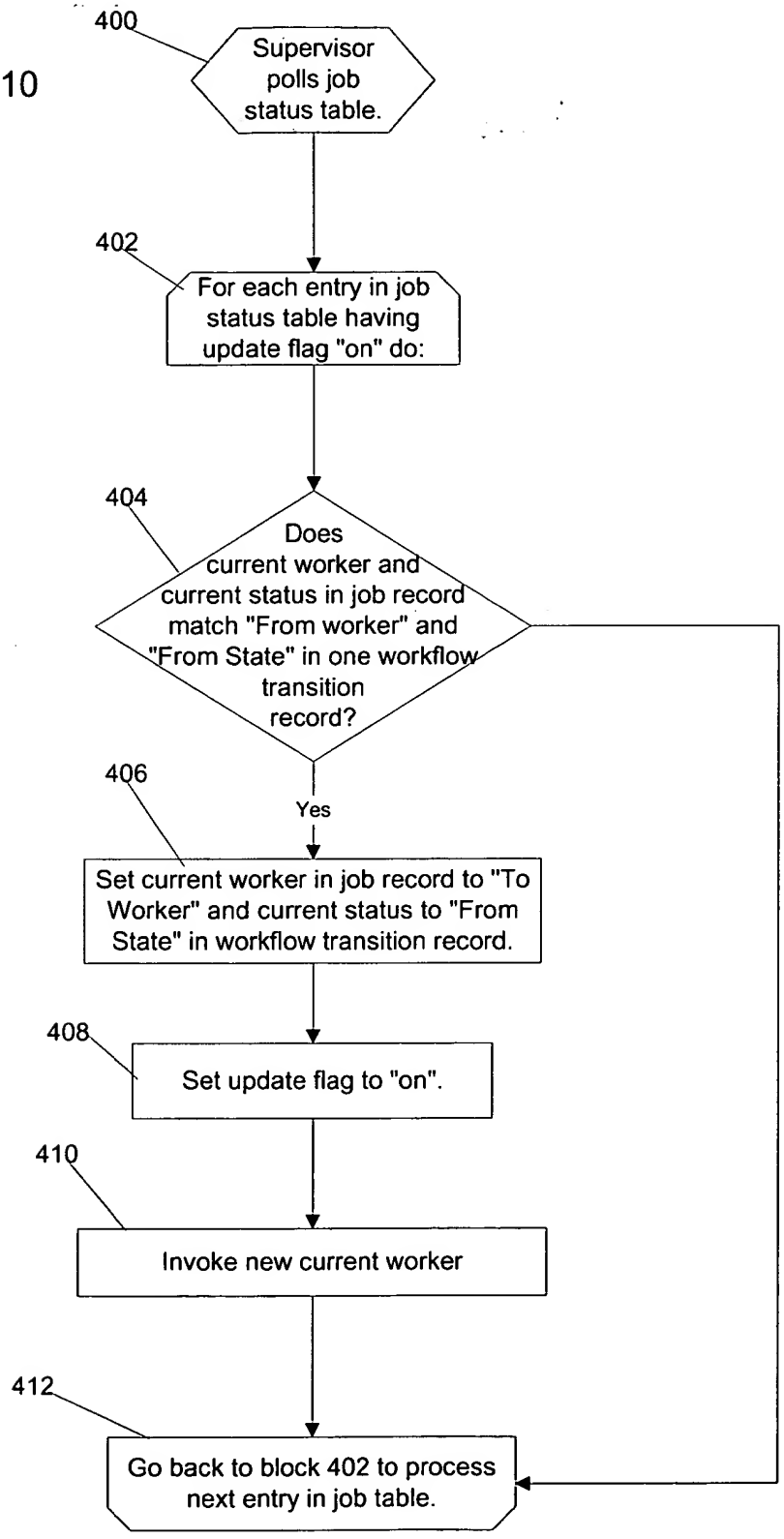
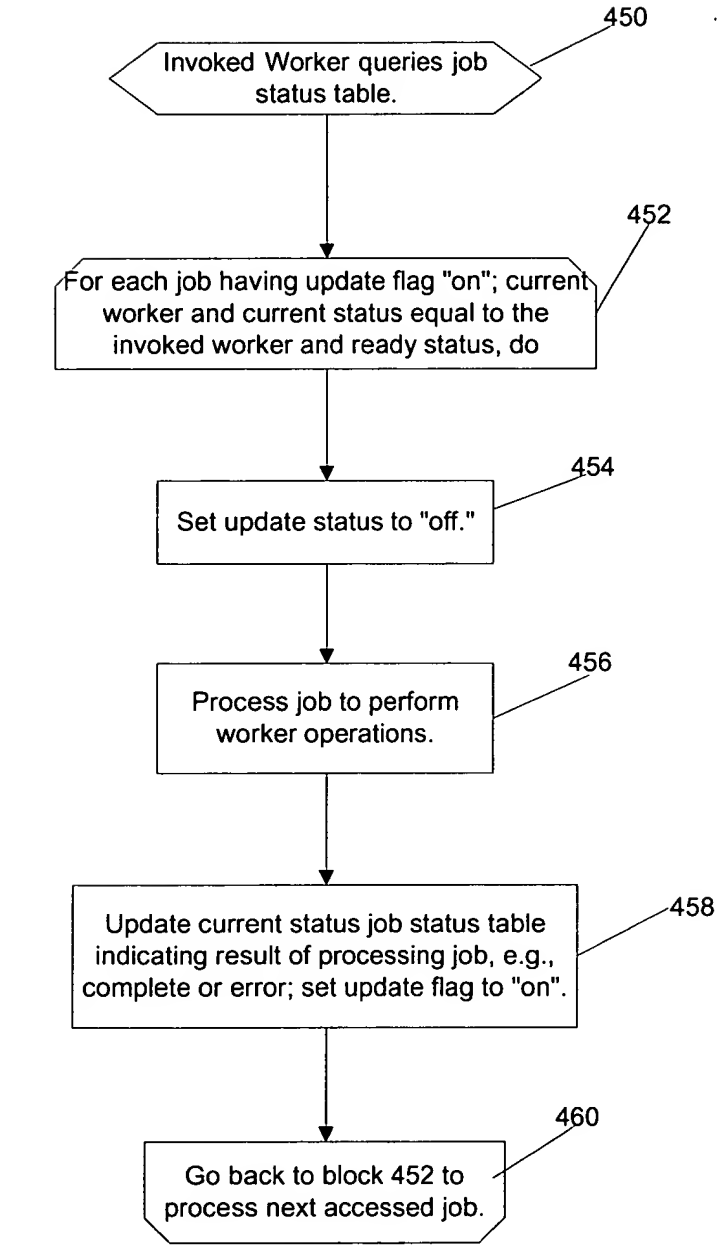

400
Supervisor polls job status table.
402
For each entry in job status table having update flag "on" do:
404
Does current worker and current status in job record match "From worker" and "From State" in one workflow transition record?
Yes
406
Set current worker in job record to "To Worker" and current status to "From State" in workflow transition record.
408
Set update flag to "on".
410
Invoke new current worker
412
Go back to block 402 to process next entry in job table.

FIG. 11


450
Invoked Worker queries job status table.
452
For each job having update flag "on"; current worker and current status equal to the invoked worker and ready status, do
454
Set update status to "off."
456
Process job to perform worker operations.
458
Update current status job status table indicating result of processing job, e.g., complete or error; set update flag to "on".
460
Go back to block 452 to process next accessed job.